# Xinmeng Li

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## Education

Dec. 2020 **Ph.D.** in Computer Science — *Tufts University*
May. 2017 **M.S.** in Computer Science — *Tufts University*
May. 2015 **B.S.** in Computer Science — *Sichuan University*

## Skills

Language **Proficient in Python,** Familiar with C/C++, MATLAB, R, LaTex, HTML, CSS
Package TensorFlow, Numpy, PyTorch, Keras, Matplotlib, Pandas, RdKit
Database Protein Data Bank, PubChem, KEGG, METLIN, IMGT, HMDB

## Experience

June - Aug. 2019 **Food and Drug Administration,** Division of Modeling and Methods, *ORISE Fellow*
Develop a deep learning model to predict the concentration-time curves for drugs.

2015 - 2020 **Tufts University,** Department of Computer Science, *Research and Teaching Assistant*
Courses: Bayesian Deep Learning, Machine Learning, Computational Biology

## Projects

2017 - 2020 **MetID,** Identify Metabolites with Tandem Mass Spectra Data using Deep Neural Network
- Develop and validate deep learning models to identify metabolites.
- Analyze metabolite structure representation data and tandem mass spectra data.
- Identify metabolites with untargeted metabolomic spectra data from candidate sets.

2016 - 2019 **ASAP,** Antibody Sequence Analysis using Statistical Testing and Machine Learning
- Develop a pipeline to analyze salient features in antibody protein sequences.
- Provide recommendations on antibody sequence design with combinations of salient features.

2016 - 2017 **Pathway-ID,** Identify Active Pathway in Metabolic Network with Metabolomics Data
- Develop a model to predict the probability of a pathway activating in the metabolic network.
- Annotate metabolites in the metabolic network using untargeted metabolomics data.

## Publications

1. **Li X**, Van Deventer J, Hassoun S. "Towards the Design of Matrix Metalloproteinases (MMP) Antibody Sequences." ACM International Conference on Bioinformatics, 2017, pp. 624-624.
2. Porokhin, V.,**Li X**, Hassoun S. "Pathway Enrichment Analysis for Untargeted Metabolomics." ACM International Conference on Bioinformatics, 2017, pp. 623-623.
3. Hu R, Wang Y, Yang M, **Li X**, Luo Z, Li G. "Improved Analysis of Inorganic Coal Properties Based on Near-infrared Reflectance Spectroscopy." Analytical Methods. 2015, Vol. 7, pp. 5282-8.
4. **Li X**, Liu L. "Volume Measurement System of Massive Material Based on Aerial Photography." Chinese Software Copyright. No. 2014SR096344.

## Awards

2014 - 2020 **Tang Lixin Scholarship,** *Tang Lixin Education Development Foundation*
2017 **Kerk and Janelle Loevner Graduate Fellowship,** *Tufts University*
2012 **National College Student Innovative Research Grant,** *Ministry of Education of China*